

Customer No.: 31561  
Docket No.: 12301-US-PA  
Application No.: 10/708,850

### AMENDMENTS

Please amend the application as indicated hereafter.

**Claim 1.** (currently amended) A method of inter-frame Y/C separation, comprising:

sampling a composite video signal for temporarily storing a plurality of sampled data  $F_m P_{x,y}$ , wherein the  $F_m P_{x,y}$  represents data of the y pixel at the x line of the m frame, and the m, x and y are integers larger than, or equal to, 0;

measuring a plurality of luma data  $Y_{x,y}$  by a  $F_{m+1} P_{x,y}$ , the  $F_m P_{x,y}$ , a  $F_{m-1} P_{x,y}$  and a  $F_{m-2} P_{x,y}$ , wherein  $Y_{x,y}$  represents luma data of the y pixel of the x line, and  $Y_{x,y} = (F_{m+1} P_{x,y} + F_m P_{x,y} + F_{m-1} P_{x,y} + F_{m-2} P_{x,y})/4$ ; and

measuring a plurality of chroma data  $C_{x,y}$  by the  $F_{m+1} P_{x,y}$ , the  $F_m P_{x,y}$ , the  $F_{m-1} P_{x,y}$  and the  $F_{m-2} P_{x,y}$ , wherein  $C_{x,y}$  represents chroma luma data of the y pixel of the x line.

**Claim 2. (cancelled)**

**Claim 3. (currently amended)** The method of inter-frame Y/C separation of claim 12, wherein the luma data  $Y_{x,y}$  are the luma data of the m frame.

**Claim 4. (original)** The method of inter-frame Y/C separation of claim 1, wherein when the composite video signal is a signal of NTSC, the step of sampling the composite video signal is performed by 4 folds of frequency of a sub-carrier signal, and the phase of the sub-carrier signal is 0,  $0.5\pi$ ,  $\pi$ , or  $1.5\pi$ .

**Claim 5. (original)** The method of inter-frame Y/C separation of claim 4, wherein a formula for measuring the chroma data is:

Customer No.: 31561  
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Application No.: 10/708,850

$$C_{x,y} = \pm(F_m P_{x,y} + F_{m-2} P_{x,y} - F_{m+1} P_{x,y} - F_{m-1} P_{x,y})/4.$$

Claim 6. (original) The method of inter-frame Y/C separation of claim 5, wherein the chroma data  $C_{x,y}$  are the chroma data of the  $m$  frame.

Claim 7. (original) The method of inter-frame Y/C separation of claim 1, wherein the step of sampling the composite video signal is performed by 4 folds of frequency of a sub-carrier signal, and the phase of the sub-carrier signal is  $0.25\pi$ ,  $0.75\pi$ ,  $1.25\pi$ , or  $1.75\pi$ .

Claim 8. (original) The method of inter-frame Y/C separation of claim 7, wherein the chroma data are measured in accordance with a formula:

$$C_{x,y} = \pm(F_{m+1} P_{x,y} + F_m P_{x,y} - F_{m-1} P_{x,y} - F_{m-2} P_{x,y})/4; \text{ or}$$

$$C_{x,y} = \pm(F_m P_{x,y} + F_{m-1} P_{x,y} - F_{m+1} P_{x,y} - F_{m-2} P_{x,y})/4.$$

Claim 9. (original) The method of inter-frame Y/C separation of claim 8, wherein the chroma data  $C_{x,y}$  are the chroma data of the  $m$  frame.

Claim 10. (original) The method of inter-frame Y/C separation of claim 7, wherein when the composite video signal is a signal of PAL system, the step of sampling is performed at the phase of the sub-carrier signal is  $0.25\pi$ ,  $0.75\pi$ ,  $1.25\pi$ , or  $1.75\pi$ .